

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: June 25, 2003, 14:40:41 ; Search time 12.7349 Seconds
(Without alignments)
837.928 Million cell updates/sec

Title: US-09-622-613B-17
Perfect score: 606
Sequence: 1 MOWMATEFOOKHIINTPIICN.....ICVKEQNPVHFAGIGRCP 111

Scoring table: BIOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 283224 seqs, 96134422 residues

Total number of hits satisfying chosen parameters: 283224

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : FIR_73:*
1: p1r1:*
2: p1r2:*
3: p1r3:*
4: p1r4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	582.5	96.1	111	2 A27121	ribonuclease-relat
2	449	74.1	111	1 JX0120	ribonuclease-relat
3	368	60.7	111	2 JX0085	pancreatic ribonuc
4	268.5	44.3	104	2 JX5935	ribonuclease-relat
5	129.5	21.4	124	1 NRMHK	pancreatic ribonuc
6	129.5	21.4	145	1 A35932	angiogenin precurs
7	127.5	21.0	167	2 S20066	pancreatic-type ri
8	126.5	20.9	124	1 NRGFI	pancreatic ribonuc
9	125.5	20.7	119	2 S41111	pancreatic ribonuc
10	116.5	9.2	124	1 NRPRI	pancreatic ribonuc
11	116	9.1	122	1 NNRGR	pancreatic ribonuc
12	114.5	8.9	128	1 NRCUR	pancreatic ribonuc
13	114.5	18.9	149	1 NRMSS	pancreatic ribonuc
14	113.5	18.7	123	1 A43825	angiogenin - pig
15	112.5	18.6	128	1 NRCGPB	pancreatic ribonuc
16	111.5	18.4	128	1 NRCMO	pancreatic ribonuc
17	110.5	18.2	124	1 NRCMB	pancreatic ribonuc
18	110.5	18.2	124	1 NRCMB	pancreatic ribonuc
19	110.5	18.2	124	1 NRCMB	pancreatic ribonuc
20	110.5	18.2	128	1 NRCMB	pancreatic ribonuc
21	108.5	17.9	124	2 S08549	ribonuclease - dom
22	108	17.8	125	1 A32474	angiogenin [valida
23	107.5	17.7	124	1 NRDEN	angiogenin precurs
24	107	17.7	147	1 NRDEN	angiogenin precurs
25	106.5	17.6	124	1 NRDEN	angiogenin precurs
26	106.5	17.6	124	1 NRDEN	angiogenin precurs
27	106	17.5	125	1 NRDEN	angiogenin - rabbi
28	105.5	17.4	130	2 S22808	pancreatic ribonuc
29	104.5	17.2	124	1 NRBOR	pancreatic ribonuc

30	104.5	17.2	124	1 NRMKB	pancreatic ribonuc
31	104.5	17.2	124	1 NRMKN	pancreatic ribonuc
32	104.5	17.2	124	2 S07141	pancreatic ribonuc
33	104.5	17.2	124	2 JCS560	pancreatic ribonuc
34	104.5	17.2	150	1 NRBBO	pancreatic ribonuc
35	104.5	17.2	158	2 161900	pancreatic ribonuc
36	103.5	16.9	124	1 NRSKH	pancreatic ribonuc
37	102.5	16.9	119	2 JX0115	pancreatic ribonuc
38	102.5	16.9	124	1 NRCB	pancreatic ribonuc
39	102.5	16.9	152	1 NRCB	pancreatic ribonuc
40	100.5	16.6	124	1 NRP	pancreatic ribonuc
41	100.5	16.6	125	4 A47498	pancreatic ribonuc
42	100.5	16.6	150	1 NRBOS	pancreatic ribonuc
43	98.5	16.3	124	1 NRCN	pancreatic ribonuc
44	98.5	16.3	124	1 NRCN	pancreatic ribonuc
45	98	16.2	125	2 S04503	pancreatic ribonuc

ALIGNMENTS

RESULT 1

A27121
ribonuclease-related stalic acid-binding lectin - bullfrog
C:Species: Rana catesbeiana (bullfrog)
C:Date: 19-Nov-1988 #sequence_revision 19-Nov-1988 #text_change 30-Jun-1993
C:Accession: A27121
R:Titani, K.; Takio, K.; Kuwada, M.; Nitta, K.; Sakakibara, F.; Kawachi, H.; Takayan
Biochemistry 26, 2189-2194, 1987
A:Title: Amino acid sequence of stalic acid-binding lectin from frog (Rana catesbeiana)
A:Reference number: A27121; MUID:87299649; PMID:3304421
A:Accession: A27121
A:Molecule type: protein
A:Residues: 1111 <TR>
C:Superfamily: pancreatic ribonuclease
C:Keywords: lectin

Query Match 96.1%; Score 582.5; DB 2; Length 111;
Best Local Similarity 97.3%; Pred. No. 8.4e-52;
Matches 108; Conservative 1; Mismatches 1; Indels 1; Gaps 1;

OY 2 QNMTFOOKHIINTPII-CNTIMDNIIYVGQCKRVTFIISATYKATCTGVINNV 60
Db :|||||
1 ENMTFOOKHIINTPIIICNTIMDNIIYVGQCKRVTFIISATYKATCTGVINNV 60
OY 61 LSTRFOUNTCTRTSITPRCPYSSRFTFNICVKEQNPVHFAGIGRCP 111
Db :|||||
61 LSTRFOUNTCTRTSITPRCPYSSRFTFNICVKEQNPVHFAGIGRCP 111

RESULT 2

JX0120
ribonuclease-related stalic acid-binding lectin - Japanese frog
C:Species: Rana japonica (Japanese frog)
C:Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 10-Sep-1999
C:Accession: JX0120
R:Kamitani, Y.; Oyama, F.; Oyama, R.; Sakakibara, F.; Nitta, K.; Kawachi, H.; Takayana
J. Biochem. 108, 139-143, 1990
A:Title: Amino acid sequence of a lectin from Japanese frog (Rana japonica) eggs.
A:Reference number: JX0120; MUID:91035319; PMID:2229005
A:Accession: JX0120
A:Molecule type: protein
A:Residues: 1111 <RAM>
A:Experimental source: egg
C:Superfamily: pancreatic ribonuclease
C:Keywords: lectin; pyroglyutamic acid
F1/Modified site: pyroglutamate carboxylic acid (Gln) #status experimental
F19-72,34-82,52-97,94-111/Disulfide bonds: #status experimental

Query Match 74.1%; Score 449; DB 1; Length 111;
Best Local Similarity 77.5%; Pred. No. 2.5e-38;
Matches 86; Conservative 7; Mismatches 16; Indels 2; Gaps 2;

[illegible]

RESULT 3

pancreatic ribonuclease (EC 3.1.27.5) - bullfrog
C:Species: Rana catesbeiana (bullfrog)
C:Date: 07-Sep-1990 #sequence_revision 07-Sep-1990 #text_change 05-Aug-1994
C:Accession: JX0085
R:MitA, R.: Kataeyama, N.; Okabe, Y.; Iwama, M.; Watanabe, H.; Abe, Y.; Okazaki, T.; Oh
J.: Biochem. 106, 729-735, 1989
A:Title: Primary structure of a ribonuclease from bullfrog (Rana catesbeiana) liver.
A:Reference number: JX0085; MUID:90130374; PMID:2613682
A:Accession: JX0085
A:Molecule type: protein
A:Residues: 1-111 <NT>
C:Superfamily: pancreatic ribonuclease
C:Keywords: hydrolase; pyroglutamic acid
E:1/Modified site: pyrrolidone carboxylic acid (Gln) #status experimental
E:10_35_104/Active site: His, Lys, His #status predicted
E:19-72_34-82_52-97_94-111/Dsulfide bonds: #status predicted

Query Match%	60.7%	Score 368;	DB 2;	length 111;
Best Local Similarity	64.9%	Pred. No. 3.7e-30;		
Matches 72;	Conservative	9;	Mismatches 28;	Indels 2;
			Gaps	2

[illegible]

RESULT 4

C: ribonuclease-related anti-tumor protein - northern leopard frog (fragment)
C: Species: Rana pipiens (northern leopard frog)
C: Date: 31-Jul-1991 #sequence_revision 31-Jul-1991 #text_change 30-Jun-1993
C: Accession: A39035
R: Ardelt, W.; Mikulski, S.M.; Shogen, K.
J. Biol. Chem. 266, 245-251, 1991
A: Title: Amino acid sequence of an anti-tumor protein from Rana pipiens oocytes and early embryos
A: Reference number: A39035; MUID:91093131; PMID:1985896
A: Accession: A39035
A: Status: preliminary
A: Molecule type: protein
A: Residues: 1-104 <ARD>
C: Superfamily: pancreatic ribonuclease

Query Match	44.3%	Score 268.5;	DB 2;	Length 104;
Best Local Similarity	47.7%	Pred. No. 3.8e-20;		
Matches	53;	Conservative	33;	Indels 9;
				Gaps 4;

```

QY      2  QNATTEQOKKIINT - PICTITMDNNIYIYGAGCCRTVFETIIISATTVAIICGV - NNN 59
      3  : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db      1  EDWLTEGKKNIITRTVDODCNIMSTNLF - - - - - HCKKNFIITRPREPVAIICKGIITASN 56

QY      60  VLSITRQALNTCTRTSTITPPPCPYSSRTETNIYCVACENQYPPVHFGISRC 110
      61  : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : : :
Db      57  VLTISEYISDC - - - - - NWTSPKCYKUKKSTNNKCCVACENQADAPVHFVGVSQC 104

```

RESULT 5

pancreatic ribonuclease (EC 3.1.27.5) - minke whale

N:Alternate names: RNase I; RNase A
C:Species: Balaenoptera acutorostrata (minke whale, lesser rorqual)
C:Date: 24-Apr-1984 #sequence_revision 24-Apr-1984 #text_change 03-Jun-1994
C:Accession: A00818
R:Emmens, M.; Welling, G.W.; Beintema, J.J.
R:Accession: J0157, J0158, J0159, J0160, J0161, J0162, J0163, J0164, J0165, J0166, J0167, J0168, J0169, J0170, J0171, J0172, J0173, J0174, J0175, J0176, J0177, J0178, J0179, J0180, J0181, J0182, J0183, J0184, J0185, J0186, J0187, J0188, J0189, J0190, J0191, J0192, J0193, J0194, J0195, J0196, J0197, J0198, J0199, J0200, J0201, J0202, J0203, J0204, J0205, J0206, J0207, J0208, J0209, J0210, J0211, J0212, J0213, J0214, J0215, J0216, J0217, J0218, J0219, J0220, J0221, J0222, J0223, J0224, J0225, J0226, J0227, J0228, J0229, J0230, J0231, J0232, J0233, J0234, J0235, J0236, J0237, J0238, J0239, J0240, J0241, J0242, J0243, J0244, J0245, J0246, J0247, J0248, J0249, J0250, J0251, J0252, J0253, J0254, J0255, J0256, J0257, J0258, J0259, J0260, J0261, J0262, J0263, J0264, J0265, J0266, J0267, J0268, J0269, J0270, J0271, J0272, J0273, J0274, J0275, J0276, J0277, J0278, J0279, J0280, J0281, J0282, J0283, J0284, J0285, J0286, J0287, J0288, J0289, J0290, J0291, J0292, J0293, J0294, J0295, J0296, J0297, J0298, J0299, J0300, J0301, J0302, J0303, J0304, J0305, J0306, J0307, J0308, J0309, J0310, J0311, J0312, J0313, J0314, J0315, J0316, J0317, J0318, J0319, J0320, J0321, J0322, J0323, J0324, J0325, J0326, J0327, J0328, J0329, J0330, J0331, J0332, J0333, J0334, J0335, J0336, J0337, J0338, J0339, J0340, J0341, J0342, J0343, J0344, J0345, J0346, J0347, J0348, J0349, J0350, J0351, J0352, J0353, J0354, J0355, J0356, J0357, J0358, J0359, J0360, J0361, J0362, J0363, J0364, J0365, J0366, J0367, J0368, J0369, J0370, J0371, J0372, J0373, J0374, J0375, J0376, J0377, J0378, J0379, J0380, J0381, J0382, J0383, J0384, J0385, J0386, J0387, J0388, J0389, J0390, J0391, J0392, J0393, J0394, J0395, J0396, J0397, J0398, J0399, J0400, J0401, J0402, J0403, J0404, J0405, J0406, J0407, J0408, J0409, J0410, J0411, J0412, J0413, J0414, J0415, J0416, J0417, J0418, J0419, J0420, J0421, J0422, J0423, J0424, J0425, J0426, J0427, J0428, J0429, J0430, J0431, J0432, J0433, J0434, J0435, J0436, J0437, J0438, J0439, J0440, J0441, J0442, J0443, J0444, J0445, J0446, J0447, J0448, J0449, J0450, J0451, J0452, J0453, J0454, J0455, J0456, J0457, J0458, J0459, J0460, J0461, J0462, J0463, J0464, J0465, J0466, J0467, J0468, J0469, J0470, J0471, J0472, J0473, J0474, J0475, J0476, J0477, J0478, J0479, J0480, J0481, J0482, J0483, J0484, J0485, J0486, J0487, J0488, J0489, J0490, J0491, J0492, J0493, J0494, J0495, J0496, J0497, J0498, J0499, J0500, J0501, J0502, J0503, J0504, J0505, J0506, J0507, J0508, J0509, J0510, J0511, J0512, J0513, J0514, J0515, J0516, J0517, J0518, J0519, J0520, J0521, J0522, J0523, J0524, J0525, J0526, J0527, J0528, J0529, J0530, J0531, J0532, J0533, J0534, J0535, J0536, J0537, J0538, J0539, J0540, J0541, J0542, J0543, J0544, J0545, J0546, J0547, J0548, J0549, J0550, J0551, J0552, J0553, J0554, J0555, J0556, J0557, J0558, J0559, J0560, J0561, J0562, J0563, J0564, J0565, J0566, J0567, J0568, J0569, J0570, J0571, J0572, J0573, J0574, J0575, J0576, J0577, J0578, J0579, J0580, J0581, J0582, J0583, J0584, J0585, J0586, J0587, J0588, J0589, J0590, J0591, J0592, J0593, J0594, J0595, J0596, J0597, J0598, J0599, J0600, J0601, J0602, J0603, J0604, J0605, J0606, J0607, J0608, J0609, J0610, J0611, J0612, J0613, J0614, J0615, J0616, J0617, J0618, J0619, J0620, J0621, J0622, J0623, J0624, J0625, J0626, J0627, J0628, J0629, J0630, J0631, J0632, J0633, J0634, J0635, J0636, J0637, J0638, J0639, J0640, J0641, J0642, J0643, J0644, J0645, J0646, J0647, J0648, J0649, J0650, J0651, J0652, J0653, J0654, J0655, J0656, J0657, J0658, J0659, J0660, J0661, J0662, J0663, J0664, J0665, J0666, J0667, J0668, J0669, J0670, J0671, J0672, J0673, J0674, J0675, J0676, J0677, J0678, J0679, J0680, J0681, J0682, J0683, J0684, J0685, J0686, J0687, J0688, J0689, J0690, J0691, J0692, J0693, J0694, J0695, J0696, J0697, J0698, J0699, J0700, J0701, J0702, J0703, J0704, J0705, J0706, J0707, J0708, J0709, J0710, J0711, J0712, J0713, J0714, J0715, J0716, J0717, J0718, J0719, J0720, J0721, J0722, J0723, J0724, J0725, J0726, J0727, J0728, J0729, J0730, J0731, J0732, J0733, J0734, J0735, J0736, J0737, J0738, J0739, J0740, J0741, J0742, J0743, J0744, J0745, J0746, J0747, J0748, J0749, J0750, J0751, J0752, J0753, J0754, J0755, J0756, J0757, J0758, J0759, J0760, J0761, J0762, J0763, J0764, J0765, J0766, J0767, J0768, J0769, J0770, J0771, J0772, J0773, J0774, J0775, J0776, J0777, J0778, J0779, J0780, J0781, J0782, J0783, J0784, J0785, J0786, J0787, J0788, J0789, J0790, J0791, J0792, J0793, J0794, J0795, J0796, J0797, J0798, J0799, J0800, J0801, J0802, J0803, J0804, J0805, J0806, J0807, J0808, J0809, J0810, J0811, J0812, J0813, J0814, J0815, J0816, J0817, J0818, J0819

A:Title: The amino acid sequence of pike whale (lessor rorqual) pancreatic ribonucleoproteins
A:Reference number: A00818; MUID:7627785; PMID:962870

A:Molecule type: protein
A:Residues: 1-124 <EMM>
C:Superfamily: pancreatic ribonuclease
C:Keywords: glycoprotein; hydrolase; nucleic acid digestion; pancreas
E:12/41/119/Active site: His, Lys, His #status predicted
F:26-84/40-95/58-110/65-72/Disulfide bonds: #status predicted
F:76/Binding site:carbohydrate (asn) (covalent) (partial) #status experimental

Query Match	21.4%	Score	129.5	DB 1	Length	124			
Best Local Similarity	32.5%	Pred. No.	4.8e-06						
Matches	38	Conservative	16	Mismatches	40	Indels	23	Gaps	7

[illegible]

RESULT 6

angiogenin precursor - mouse
N:Alternate names: angiogenesis factor
N:Contains: ribonuclease (EC 3.1.27.-)
C:Species: Mus musculus (house mouse)
C:Date: 09-Nov-1990 #sequence_revision 09-Nov-1990 #text_change 18-Jun-1999
C:Accession: A35932
R:Bond, M.D.; Vallee, B.L.
Biochem. Biophys. Res. Commun. 171, 988-995, 1990
A:Title: Isolation and sequencing of mouse angiogenin DNA.
A:Reference number: A35932; MUID:91025023; PMID:222458
A:Accession: A35932
A:Status: not compared with conceptual translation
A:Molecule type: DNA
A:Residues: 1-145 <BON>
A:Cross-references: GB:022516; NID:g726325; PIDN:AAA91366.1; PID:g726326
C:Genetics:
A:Introns: #status absent
C:Function:
A:Description: hydrolyzes tRNA, induces vascularization of normal and malignant tissue
C:Superfamily: pancreatic ribonuclease
C:Keywords: angiogenesis; hydrolysis; nucleic acid degradation; pyroglutamic acid
F:1-14/Domain: signal sequence #status predicted <SIG>
F:25-145/Product: angiogenin #status predicted <MAT>
E:25/Modified site: pyrroloisidic carboxylic acid (Gln) (in mature form) #status predicted
F:37,64,137/Active site: His Lys, His #status predicted
F:50-104,63-115,81-130/Disulfide bonds: #status predicted

Query Match	21.4%	Score 129.5	DB 1	Length 145
Best Local Similarity	38.2%	Pred. No. 5.6e-06		
Matches 29	Conservative 12	Mismatches 30	Indels 5	Gaps 3

QY 34 CKRVTEFIISSATYKALIC---TGVINNV-LSSTRPOLNCTRTSLR-PCVYSSRTE 88
Db 63 CKQVNFHFGKNSNLKALCAGANGSPYRENLMKMSPFQVTTCKHTGGSPPRCQYRASAG 122
QY 89 TNLICVCENQTPVPHF 104
Db 123 FRRHVLACENGSLPVHF 138

RESULT 7

pancreatic-type ribonuclease (EC 3.1.27.5) Bb precursor, brain - bovine
C:Species: Bos primigenius taurus (cattle)
C:Date: 22-Nov-1993 #sequence_revision 12-May-1995 #text_change 22-Jun-1999
C:Accession: S20066; JX0056

R:Sasso, M.P.; Caisano, A.; Confalone, E.; Cosi, C.; Sorrentino, S.; Viola, M.; Palmieri
Nucleic Acids Res. 19, 6469-6474, 1991

A>Title: Molecular cloning of the gene encoding the bovine brain ribonuclease and its ex
A:Reference number: S20066; MUID:92093604; PMID:1754384

A:Accession: S20066

A:Molecule type: RNA

A:Residues: 1-167 <SNAS>

A:CROSS-references: EMBL:X59767; NID:Q150; PIDN:CAA42439.1; PTD:9151

J:Watanabe, H.; Katoh, H.; Ishii, M.; Komoda, Y.; Sanda, A.; Takizawa, Y.; Ohgi, K.
J. Biochem. 104, 939-945, 1988

A>Title: Primary structure of a ribonuclease from bovine brain.

A:Reference number: JX0056; MUID:E9214015; PMID:3243767

A:Accession: JX0056

A:Molecule type: protein

A:Residues: 27-154, S, 156-166 <MAT>

A:Experimental source: brain

C:Superfamily: pancreatic ribonuclease

C:Keywords: glycoprotein; hydrolase

F:38, 67, 145/Active site: His, Lys, His #status predicted

F:52-110, 66-121, 84-136, 91-98/Disulfide bonds: #status predicted

F:88/Binding site: carbohydrate (asn) (covalent) #status experimental

F:155/Binding site: carbohydrate (thr) (covalent) #status experimental

F:159/Binding site: carbohydrate (ser) (covalent) #status experimental

Query Match 21.0%; Score 127.5; DB 2; Length 167;
Best Local Similarity 30.6%; Pred. No. 1e-05;
Matches 37; Conservative 17; Mismatches 44; Indels 23; Gaps 7;

OY 5 ATPDOKH-----IMPILCNTINDNNIYVGGCKRVTFTFIISATTVKICTGVINM 58
| : : : : : | : : : : : | : : : : : | : : : : :
DB 32 AKFRQHMDSSSSSSNNVCNMKKR-RMTHGRCKRVNFVHESLDDVAVCS---QK 87
OY 59 NVL-----STTRQLNTCTRTSTITPPR-CYSSTRFTNYCKCE-NQY-PVHEA 105
| : : : : : | : : : : : | : : : : : | : : : : :
DB 88 NITCKNGHPNCYSQSKSTWSITDCRETGSSKYPNCAYKTSQKRYTACENPVVPVPHD 147
OY 106 G 106
DB 148 G 148

RESULT 8

NRRG

pancreatic ribonuclease (EC 3.1.27.5) - pig

M:Alternate names: RNase I; RNase A

C:Species: Sus scrofa domestica (domestic pig)

C:Date: 24-Apr-1984 #sequence_revision 24-Apr-1984 #text_change 03-Jun-1994

C:Accession: A92071; A91391; A00816

R:Jackson, R.L.; Hirs, C.H.W.
J. Biol. Chem. 245, 647-653, 1970

A>Title: The primary structure of porcine pancreatic ribonuclease. II. The amino acid se
A:Reference number: A92071; MUID:70104197; PMID:5460946

A:Accession: A92071

A:Molecule type: protein

A:Residues: 1-'Q', 3-124 <JAC>

R:Wierenga, R.K.; Huizinga, J.D.; Gaastra, W.; Wellings, G.W.; Beintema, J.J.
FEBS Lett. 31, 181-183, 1973

A>Title: Affinity chromatography of porcine pancreatic ribonuclease and reinvestigation
A:Reference number: A91391

A:Accession: A91391

A:Molecule type: protein

A:Residues: 1-124 <MTS>

R:Phehan, J.J.; Hirs, C.H.W.
J. Biol. Chem. 245, 654-661, 1970

A>Title: The primary structure of porcine pancreatic ribonuclease. III. The disulfide bo
A:Reference number: A92072; MUID:70104198; PMID:4904878

A:Contents: annotation: disulfide bonds

C:Superfamily: pancreatic ribonuclease

```

C:Keywords: glycoprotein; hydrolase; nucleic acid digestion; pancreas
F:12,41,119/Active site: His, Lys, His #status predicted
F:21,34,76/Binding site: carbohydrate (Asn) (covalent) #status experimental
F:26-84,40-95,58-110,65-72/Disulfide bonds: #status experimental

Query Match      20.9%  Score 126.5;  DB 1;  Length 124;
Best Local Similarity 30.7%  Pred. No. 9.7e-06;
Matches 35;  Conservative 19;  Mismatches 43;  Indels 17;  Gaps 6;

OY 7 FQOKH-----INPPICTIMDNNTIYVGQCKRVTFTFISSATYKALCTGV-INMN 59
|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|
DB 8 FQROHMDDDSSSSNSNTCNLMMSR-IMTQGRCKRPVNTFHESLADYQAVCSINWCK 66
|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|
OY 60 VLSTIRPOLNT-----CTRTSIPRP-CPYSSRTETNYICKENO--VPVPH 104
|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|
DB 67 NGQTCYCSNSTMHTIDCROTFGSSKYPKCAVKAQOEOKHIIIVACEGNPVPVPH 120
|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|

RESULT 9
S41111
pancreatic ribonuclease - common iguana
C:Species: Iguana iguana (common iguana)
C:Date: 19-Mar-1997 #sequence_revision 19-Mar-1997 #text_change 21-Aug-1998
C:Accession: S41111
R:Zhao, W.; Belintema, J.J.; Hofsteenge, J.
Eur. J. Biochem. 219, 641-646, 1994
A>Title: The amino acid sequence of Iguana (Iguana iguana) pancreatic ribonuclease.
A:Reference number: S41111; MUID:94139745; PMID:8307028
A:Accession: S41111
A>Status: preliminary
A:Molecule type: protein
A:Residues: 1-119 <ZNA>
C:Superfamily: pancreatic ribonuclease

Query Match      20.7%  Score 125.5;  DB 2;  Length 119;
Best Local Similarity 29.6%  Pred. No. 1.2e-05;
Matches 34;  Conservative 16;  Mismatches 52;  Indels 13;  Gaps 4;

OY 2 QNMATFOQKH-----INPPICTIMDNNTIYVGQCKRVTFTFISSATYKALC-- 52
|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|
DB 1 QDWSEFOKHHDYDEPETSASNPAYCDLMMQR-NLNPTKCKTRNTFYHASSSELEQVCGS 59
|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|
OY 53 --TGVNNVLSITRFPQNTCTRTSIT-PRCPYSSRTETNYICKENQVPVPH 104
|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|
DB 60 GCTHYEDNLVDSNESFDELTDCKNVGFAPSSCKNGTPTKRIRIACENNQPVPH 114
|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|

RESULT 10
NRPRI
pancreatic ribonuclease (EC 3.1.27.5) - pronghorn (tentative sequence)
N:Alternate names: RNase 1; RNase A
C:Species: Antilocapra americana (pronghorn)
C:Date: 28-Feb-1981 #sequence_revision 28-Feb-1981 #text_change 31-Mar-2000
C:Accession: A00813
R:Belintema, J.J.; Gaastra, W.; Munnikama, J.
J. Mol. Evol. 13, 305-316, 1979
A>Title: Primary structure of pronghorn pancreatic ribonuclease: close relationship b
A:Reference number: A00813; MUID:80075014; PMID:513141
A:Accession: A00813
A:Molecule type: protein
A:Residues: 1-124 <BRI>
C:Superfamily: pancreatic ribonuclease
C:Keywords: glycoprotein; hydrolase; nucleic acid digestion; pancreas
F:12,41,119/Active site: His, Lys, His #status predicted
F:26-84,40-95,58-110,65-72/Disulfide bonds: #status predicted
F:34/Binding site: carbohydrate (Asn) (covalent) (partial) #status experimental

Query Match      19.2%  Score 116.5;  DB 1;  Length 124;
Best Local Similarity 29.4%  Pred. No. 9.9e-05;
Matches 35;  Conservative 18;  Mismatches 43;  Indels 23;  Gaps 7;

OY 5 ATFOQKHINPI-----ICNTIMDNNTIYVGQCKRVTFTFISSATYKALCTGVINM 58
|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|:::|

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Db 6 AKEROHIDSNSSVSSNYCNOMKSR-NLTOGRCKPVNTFVHESLADVOAVCS--OK 61
 QY 59 NVL-----STTRFOLNCTRTSTTPRP-CYSSRTETNYICVCE-NQY-PVHF 104
 Db 62 NVACKNGOTNCYQISITMSITDCRETGSSKYNCAYKTKOAKHIIIVACEGPNYPVHF 120

RESULT 11

pancreatic ribonuclease (EC 3.1.27.5) - red kangaroo
 N:Alternate names: RNase A
 C:Species: Macropus rufus, Megaleia rufa (red kangaroo)
 C>Date: 30-Nov-1980 #sequence_revision 30-Nov-1980 #text_change 04-Oct-1996
 C:Accession: A00833
 R:Gaststra, W.; Welling, G.W.; Beintema, J.J.
 Eur. J. Biochem. 86, 209-217, 1978
 A:Title: The amino-acid sequence of kangaroo pancreatic ribonuclease.
 A:Reference number: A00833; MUID:78190621; PMID:658039
 A:Accession: A00833
 A:Molecule type: protein
 A:Residues: 1-122 <GAA>
 C:Superfamily: pancreatic ribonuclease
 C:Keywords: glycoprotein; hydrolase; nucleic acid digestion; pancreas
 F:11-40,117/Active site: His, Lys, His #status predicted
 F:25-83,39-94,57-109,64-71/Disulfide bonds: #status predicted
 F:61/Binding site: carbohydrate (Asn) (covalent) #status absent

Query Match 19.1%; Score 116; DB 1; Length 122;
 Best Local Similarity 29.8%; Pred. No. 0.00011;
 Matches 34: Conservative 16; Mismatches 46; Indels 18; Gaps 6;

OY 7 FQOKHI-----IMPICNTIMDNIIYVGQCKRVTFIISATYKAIC----- 52
 Db 7 FQROHMDTEHSTASSNYCNLMKAR-DMTSGCRKPLMTFIEPKSVYDVACHQENWCK 65
 QY 53 TGVIMANVLSTTRFOLNCTRTSTTPRP-CYSSRTETNYICVCE-NQY-PVHF 104
 Db 66 NGRTNC-YKSNRSLRSTNCROTGRGASKYPNCQETISNLNKQIIIVACEGQYVPVHF 118

RESULT 12

NCRU
 pancreatic ribonuclease (EC 3.1.27.5) - nutria (tentative sequence)
 N:Alternate names: RNase 1; RNase A
 C:Species: Myocastor coypus (nutria, coypu)
 C>Date: 24-Apr-1984 #sequence_revision 30-Sep-1988 #text_change 31-Mar-2000
 C:Accession: A00822
 R:van den Berg, A.; van den Hende-Timmer, L.; Beintema, J.J.
 Biochim. Biophys. Acta 453, 400-409, 1976
 A:Title: Isolation, properties and primary structure of coypu and chinchilla pancreatic
 A:Reference number: A90612; MUID:77065676; PMID:999896
 A:Accession: A00822
 A:Molecule type: protein
 A:Residues: 1-128 <VAN>
 C:Superfamily: pancreatic ribonuclease
 C:Keywords: glycoprotein; hydrolase; nucleic acid digestion; pancreas
 F:12-41,119/Active site: His, Lys, His #status predicted
 F:26-84,40-95,58-110,65-72/Disulfide bonds: #status predicted
 F:34/Binding site: carbohydrate (Asn) (covalent) #status experimental

Query Match 18.9%; Score 114.5; DB 1; Length 128;
 Best Local Similarity 30.8%; Pred. No. 0.00016;
 Matches 36: Conservative 15; Mismatches 43; Indels 23; Gaps 7;

OY 7 FQOKHI-----IMPICNTIMDNIIYVGQCKRVTFIISATYKAICTGVINNV 60
 Db 8 FQROHMDSGSPSTNPVNCNEMKSR-NMTGRCCKPVNTFVHEPLADVOAVC---FQKNV 63
 QY 61 L-----STTRFOLNCTRTSTTPRP-CYSSRTETNYICVCE-NQY-PVHF 104
 Db 64 LCKNGOTNCYQSNMNMHTTDCRVTNSNDYPCGSTRTSQSEKSIYVACGNGYVPVHF 120

RESULT 13

NRMS
 pancreatic ribonuclease (EC 3.1.27.5) precursor - mouse
 N:Alternate names: RNase 1; RNase A
 C:Species: Mus musculus (house mouse)
 C>Date: 30-Nov-1980 #sequence_revision 13-Mar-1997 #text_change 18-Jun-1999
 C:Accession: A34090; S22598; A00830
 R:Schueller, C.; Nijssen, H.M.J.; Kok, R.; Beintema, J.J.
 Mol. Biol. Evol. 7, 29-44, 1990
 A:Title: Evolution of nucleic acids coding for ribonucleases: the mRNA sequence of mo
 A:Reference number: A34090; MUID:90136034; PMID:2299980
 A:Accession: A34090
 A:Status: preliminary
 A:Molecule type: mRNA
 A:Residues: 1-149 <SCH>

A:Cross-references: GB:M27814; NID:9200762; PIDN:AAA40060.1; PID:9200763
 R:Samuelson, L.C.; Wiedauer, K.; Howard, G.; Schmidt, R.M.; Koeplin, D.; Weisler, M.H.
 Nucleic Acids Res. 19, 6935-6941, 1991
 A:Title: Isolation of the murine ribonuclease gene Rib-1: structure and tissue specif
 A:Reference number: S22598; MUID:92107684; PMID:1840677
 A:Accession: S22598
 A:Status: preliminary
 A:Molecule type: DNA
 A:Residues: 1-149 <SAW>

A:Cross-references: EMBL:X60103; NID:953981; PIDN:CAA42697.1; PID:953982
 R:Lenstra, J.A.; Beintema, J.J.
 Eur. J. Biochem. 98, 399-408, 1979
 A:Title: The amino acid sequence of mouse pancreatic ribonuclease.
 A:Reference number: A00830; MUID:80024269; PMID:556267
 A:Accession: A00830
 A:Molecule type: protein
 A:Residues: 26-149 <LEN>
 C:Superfamily: pancreatic ribonuclease
 C:Keywords: glycoprotein; hydrolase; nucleic acid digestion; pancreas
 F:1-25/Domain: signal sequence #status predicted <SIG>
 F:26-149/Product: pancreatic ribonuclease #status experimental <MAT>
 F:37,66,144/Active site: His, Lys, His #status predicted
 F:51-109,65-120,83-135,90-97/Disulfide bonds: #status predicted
 F:62,87/Binding site: carbohydrate (Asn) (covalent) #status predicted

Query Match 18.9%; Score 114.5; DB 1; Length 149;
 Best Local Similarity 29.9%; Pred. No. 0.00019;
 Matches 35: Conservative 16; Mismatches 43; Indels 23; Gaps 7;

OY 7 FQOKHI-----IMPICNTIMDNIIYVGQCKRVTFIISATYKAICTGVINNV 60
 Db 33 FQROHMDSDGSSINSPYCNOMKRR-DMTGSCRPVNTFVHEPLADVOAVCS---QENV 88
 QY 61 L-----STTRFOLNCTRTSTTPRP-CYSSRTETNYICVCE-NQY-PVHF 104
 Db 89 TCKNRKSNCKYSSSLHTDCHLKGNSKYPNCQDKYKTKQYQKHIIIVACEGNGYVPVHF 145

RESULT 14

A43825
 angiotensin - pig
 C:Species: Sus scrofa domestica (domestic pig)
 C>Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 10-Sep-1999
 C:Accession: S29834; A43825
 R:Bond, M.D.; Strydom, D.J.; Vallee, B.L.
 Biochim. Biophys. Acta 1162, 177-186, 1993
 A:Title: Characterization and sequencing of rabbit, pig and mouse angiotensins: discer
 A:Reference number: S29833; MUID:93192291; PMID:8448182
 A:Accession: S29834
 A:Status: preliminary
 A:Molecule type: protein
 A:Residues: 1-123 <BON>
 A:Note: This sequence was submitted to the Protein Sequence Database, December 1992
 C:Superfamily: pancreatic ribonuclease

Query Match 18.7%; Score 113.5; DB 1; Length 123;
 Best Local Similarity 38.2%; Pred. No. 0.0002;
 Matches 29: Conservative 6; Mismatches 36; Indels 5; Gaps 2;

OY	34	KRAVTEIISSATVKAICTG----	YINNVULSTPTEPOLNCTPRTA	ITPR	-PCPSSRRE	88
Db	39	CKENVEITIEGTRNDIKAKICDKNGE	RYNNFRRSKSPFOITCTCKNKGS	NRPRG	YATAG	98
OY	89	TNIVICACENQYVNE	104.			
Db	99	FTIIVACENGELPVNE	114			

RESULT 15

NCNGPR
 pancreatic ribonuclease (EC 3.1.27.5) B - guinea pig (tentative sequence)
 N:Alternate names: RNase IB
 C:Species: *Cavia porcellus* (guinea pig)
 C:Date: 24-Apr-1984 #sequence_revision 24-Apr-1984 #text_change 31-Mar-2000
 C:Accession: A00826
 R:van den Berg, A.; van den Herde-Timmer, L.; Hofsteenge, J.; Gaastra, W.; Beintema, J.
 Eur. J. Biochem. 75, 91-100, 1977
 A:Title: Guinea pig pancreatic ribonucleases. Isolation, properties, primary structure
 A:Reference number: A91247; MUID:77185023; PMID:862624
 A:Accession: A00826
 A:Molecule type: protein
 A:Residues: 1-128 <VAN>
 A:Note: 64-Pro was also found
 C:Superfamily: pancreatic ribonuclease
 C:Keywords: glycoprotein; hydrolase; nucleic acid digestion; pancreas
 F:12,41,119/Active site: His, Lys, His #status predicted
 F:21,34/Binding site: carbohydrate (Asn) (covalent) #status experimental
 E:26-84,40-95,58-110,65-72/Disulfide bonds: #status predicted

Query Match Similarity	18.6%	Score 112.5	DB 1	Length 128
Best Local Similarity	30.8%	Pred No. 0.00026		
Matches 36	Conservative 14	Mismatches 44	Indels 23	Gaps 6

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QY      7 F00KAI-----INTPLICTIMDNINVIYGCCCKRVTEFIILSATTVAICGVINMV   60
        |||::|||::|||::|||::|||::|||::|||::|||::|||::|||::|||::|||
Db      8 F0RQHMDEPSPENSSNYCYVMIR--NMIGQCRCVYNFVHSLADVGAVC---FQRNV   63
        |||::|||::|||::|||::|||::|||::|||::|||::|||::|||::|||
QY      61 L-----STTRDLNTCTRTISTTPRP-CYSSTRTEFINIYCVGCENO---YPHF   104
        |||::|||::|||::|||::|||::|||::|||::|||::|||::|||::|||
Db      64 LCKN3OTNKQSYSRMRTDCAVTSSSKPCNPNCYSRNSQAOKSLTIVACEDDPVPVPHF   120
```

Search completed: June 25, 2003, 14:58:05
Job time : 13.7349 secs

